

ABSTRACT OF THE DISCLOSURE

A solid state imaging device comprises a plurality of first channel regions of one conductive type arranged in parallel on a surface of a semiconductor substrate of a reverse conductive type. .
5 The imaging device further comprises a drain region formed in a space between the plurality of first channel regions, and a plurality of first transfer electrodes formed over the plurality of first channel regions. The plurality of first transfer
10 electrodes are arranged in parallel to one another along a direction intersecting the first channel regions. The imaging device further includes a second channel region of the one conductive type formed on the main surface of the semiconductor substrate as a connected portion of the first channel regions. The second channel region
15 extends along a direction intersecting the first channel regions. The imaging device further comprises a plurality of second transfer electrodes formed over the second channel region and arranged in parallel to one another along a direction intersecting the second channel region. The second channel region has an impurity
20 concentration lower than that of the first channel regions.